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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,538	09/13/2004	Holger Kunkat	AT02 0012 US	1391

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EXAMINER	
YANG, CLARA I	
ART UNIT	PAPER NUMBER
2612	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/26/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/507,538	KUNKAT ET AL.	
	Examiner	Art Unit	
	Clara Yang	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *13 September 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892) ✓

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08) ✓ Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to because conventional features illustrated in the drawing as rectangular boxes must be labeled. See 37 CFR 1.83(a). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities:

- The examiner suggests replacing all occurrences of "station/transponder" and "station/station" with "station-transponder" and "station-station" respectively because the virgule or slash ("/") is supposed to be used to separate alternatives.

- On page 6, lines 33-34: Change "which protocol is designed with a view to communication..." to "which is designed to communicate..."

- On page 7, line 9: Change "designed with a view to causing" to "designed to cause".

Appropriate correction is required.

Claim Objections

4. Claims 1-8 are objected to because of the following informalities:

- Claims 1-8: The examiner suggests replacing all occurrences of "station/transponder" and "station/station" with "station-transponder" and "station-station" respectively because the virgule or slash ("/") is supposed to be used to separate alternatives.

- Claims 1 and 5: The claim limitations employ the phrase "suitable for". It has been held that the recitation that an element is "suitable for" performing a function is not a positive limitation but only requires the ability to so perform.

- Claims 3 and 7: Change "is arranged with a view to causing" to "is arranged to cause".

- Claims 4 and 8: Change "is arranged with a view to communication" to "is arranged to communicate".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3, 4, 7, and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 3 and 7, the term "the least possible" is a relative term that renders the claims indefinite. The term "the least possible" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Consequently, the limitation "a station/station protocol" has been rendered indefinite by the use of the term "the least possible".

Regarding claims 4 and 8, the terms "a large number" and "as quickly as possible" are relative terms that render the claims indefinite. The terms "a large number" and "as quickly as possible" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Consequently, the limitation "a station/transponder protocol" has been rendered indefinite by the use of the term "a large number", and the limitation "the second protocol-executing means" has been rendered indefinite by the use of the term "as quickly as possible".

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Steeves (US 6,034,603).

Referring to claims 1 and 5, as shown in Fig. 1, Steeves teaches a system 100 comprising a plurality of readers 101-103 (i.e., communication station) and tags 151-155 (i.e., transponders). Reader 101, as shown in Fig. 6, comprises an integrated circuit formed by transmitter 603, receiver 602, controller 606, power regulation 605, reader network processor 601, memory 604, reader module 611, functional circuit 610, media access 609, and microcontroller 608. Per Steeves, readers 101-103 communicate with each other in addition to tags 151-155 (see Col. 2, lines 57-60; Col. 5, lines 49-51; and Col. 8, lines 1-2 and 30-40). As called for in claims 1 and 5, Steeves discloses reader 101 having (a) transmitter with processor 603 and receiver with processor 602 (i.e., first protocol executing means) that enables communication between reader 101 and a tag, a subset of tags, or any tag within range in accordance with a reader-tag protocol described in Col. 8, lines 1-28 and 41-46); and (b) a specific processor (i.e., a second protocol-executing means) that enables communication between reader 101 and another reader in accordance with a reader-to-reader protocol, such as a LonWorks® network protocol or powerline communication protocol (see Col. 2, lines 63-66 and Col. 8, lines 33-40 and 60-66). It is understood that readers 101-103 and computer 101 communicate with each other using the same network, as shown in Fig. 1.

9. Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Strong et al. (US 2003/0007473).

Referring to claims 1 and 5, Strong teaches a system, as shown in Fig. 2, comprising a local positioning system (LPS), which includes a plurality of interrogators 6 (i.e.,

communication stations) coupled to a plurality of antennas 5 that communicate with each other and with tags 2 (i.e., transponders) (see Sections [0045]-[0046], and [0054]-[0055]). Per Strong, interrogator 6 communicates with tags 2 using spread-spectrum (i.e., an interrogator-tag protocol) (see Section [0096]); thus interrogator 6 must include a first protocol-executing means. Strong further teaches that interrogators 6 are directly connected to an Ethernet local area network (LAN) and communicate with each other over the LAN using the Ethernet protocol (i.e., an interrogator-interrogator protocol) (see Sections [0047] and [0054]-[0055]); thus interrogator 6 must also include a second protocol-executing means. Though not expressly taught, Strong's interrogator 6 must have an integrated circuit comprising at least (1) a radio frequency (RF) transmitter and receiver (or an RF transceiver) and a processor that form a first protocol-executing means in order to communicate with tags 2 via spread-spectrum and (2) an Ethernet interface (i.e., a second protocol-executing means) in order to communicate with other interrogators 6 via the LAN.

Regarding claims 2 and 6, Strong teaches that interrogator 6 generates a 2.4 GHz field (i.e., an energy-supply signal) to power tags 2 over the air each time the interrogation starts (i.e., the interrogator-tag protocol begins) (see Sections [0096]-[0097]). Strong also teaches that interrogators 6 communicate with each other over an Ethernet LAN (see Section [0047]). Though Strong fails to expressly teach that interrogator 6's second protocol-executing means having a synchronizing signal generating means generating a synchronizing signal each time the interrogator-interrogator protocol starts, a message or frame generated by interrogator 6 includes an eight-byte preamble that enables a receiving interrogator 6 to lock onto the transmitting interrogator 6's timing on a frame-by-frame basis; thus the preamble functions as a

synchronization signal, and interrogator 6's second protocol-executing means must have a synchronizing signal generating means.

Regarding claims 3 and 7, because Ethernet devices only transmit when there is information to be transferred instead of transmitting continuously, as required by some network protocols, Strong's interrogators 6 conserve power by transmitting to other interrogators 6 only when necessary.

Regarding claims 4 and 8, Strong teaches that interrogator 6's first protocol-executing means handles a interrogator-tag protocol that communicates with a plurality of tags 2 (see Fig. 2 and Sections [0045] and [0055]-[0056]). In addition, Strong teaches that a master interrogator 6 sends a "turn on" command to a slave interrogator 6 seven milliseconds early (i.e., as early as possible) to compensate for a seven-millisecond delay between the master and slave interrogators 6 (see Section [0055]).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Reis et al. (US 5,686,902) teach a communication system comprising a plurality of interrogators and tags, wherein the interrogators communicate with each other via a wired network using a first protocol and with a plurality of tags via an RF network using a second protocol.
- Asama et al. (US 5,929,778) teach a data carrier system comprising a plurality of reader-writers 50 and tags 1, wherein reader-writers 50 wirelessly communicate with each other and with tags 1.
- Lueker et al. (US 6,130,896) teach a wireless LAN (WLAN) comprising a plurality of access points that communicate with each other via an Ethernet LAN (a first protocol) and with wireless devices via RF signals (i.e., a second protocol).
- Rodgers et al. (US 6,362,737) teach monitors (i.e., interrogators) communicating with each other via a LAN and with a plurality of passive tags via RF signals.

⌘⌘⌘

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clara Yang whose telephone number is (571) 272-3062. The examiner can normally be reached on Tuesdays, 1:00-2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CY
15 December 2006